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AUTHOR Howard, Elizabeth R.; Christian, Donna
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ABSTRACT

The report discusses the first- and second-language development, oral and written, of native English-speakers and native Spanish-speakers in the two-way immersion (TWI) program at Key Elementary School (Arlington, Virginia). Data were drawn from classroom observation from 1994-96, student performance measures, and student work samples. Three Spanish-speaking and three English-speaking students were chosen at each grade level for more focused observation regarding language use and participation patterns. Results show that, in general, students were observed using the language of instruction while talking to the teacher and engaged in academic activities. In the lower grades, native English-speakers were sometimes observed addressing the teacher in English during Spanish time. Use of Spanish during English time was rare. Oral English proficiency developed fully in all students. While all students achieved communicative competency by grade 5, a gap in Spanish fluency remained between native Spanish-speakers and native English-speakers. In general, all writing samples were of high quality, with the English comparable for both native-language groups. In Spanish the essays of native-speakers tended to be more sophisticated. Two samples by the same student are analyzed briefly. Implications of the findings for program development are discussed. Contains 22 references. (MSE)

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The development of bilingualism and biliteracy in Two-Way Immersion students

Elizabeth R. Howard
Donna Christian

Center for Applied Linguistics
Center for Research on Education, Diversity, and Excellence

Paper presented at the 1997 Annual Meeting of the
American Educational Research Association

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Introduction

Two-Way Immersion (TWI) is an educational model that integrates language minority and language majority students for all or most of the day, with the goal of promoting high academic achievement, first and second language development, and cross-cultural understanding for all students. In TWI programs, language learning takes place primarily through content instruction. Academic subjects are taught to all students through both English and the target language, usually Spanish. As students and teachers work together to perform academic tasks, the students' language abilities are developed along with their knowledge of the content area subject matter.

While there is a great deal of variety with regard to the specific features of TWI programs, there are also some important core similarities. First, the student populations are balanced, with approximately 50% native English speakers and 50% native speakers of the target language. Second, academic instruction takes place through both languages, with the target language being used at least 50% of the time. In this way, all students have the opportunity to be both first language models and second language learners. Furthermore, TWI creates an additive bilingual environment for all students, since the first language is maintained while the second language is acquired.

Given that first and second language development is one of the core goals of TWI programs, this paper will discuss the first and second language development of native English speakers and native Spanish speakers at the Key Elementary TWI program in Arlington,

Virginia. There are two main questions that will be addressed in this paper: 1)What levels of English language proficiency are developed by Key students, given that 50% of their academic instruction is conducted in Spanish? and 2)To what extent is Spanish language proficiency developed and/or maintained by Key students? Students' oral and written proficiency in both English and Spanish will be described, analyzed, and discussed as a way of providing a window into the language development of language minority and language majority students enrolled in these programs.

Theoretical Rationale

The theoretical rationale for TWI programs is based upon a number of principles from both bilingual education research and foreign language immersion research. First, bilingual education research indicates that for language minority students, content area instruction in the first language is likely to promote higher levels of academic achievement in the second language than content area instruction in the second language alone (Collier, 1992; Hakuta and Gould, 1987; Krashen, 1991; Lambert and Tucker, 1972; Swain and Lapkin, 1985; Tucker, 1990). Second, language minority students with strong oral language and literacy skills in the first language tend to achieve higher levels of language and literacy development in the second language than students with limited first language proficiency (Cummins, 1984; Hakuta, 1987, 1990; Snow, 1987). Third, foreign language immersion research indicates that language majority students in immersion programs are able to develop second language proficiency without compromising their academic

achievement (Harley, Allen, Cummins, and Swain, 1990). Finally, for all students, research has shown that language is learned most effectively through meaningful activities, such as those that occur during content area instruction (Brinton, Snow, and Wesche, 1989; Chamot and O'Malley, 1994; Crandall, 1987; Genesee, 1987; Olsen and Leone, 1994; Snow, Met, and Genesee, 1989).

Overall, a sociocultural perspective provides the overarching framework for TWI programs, since it holds that all learning occurs most effectively through social interaction. Specifically with regard to language learning, the integration of native English speakers and native speakers of the target language is crucial, since research indicates that second language acquisition is facilitated by interaction with native speakers (Pica, et. al., 1996). Since the student populations in TWI programs are balanced with regard to language dominance, native language models are always available in TWI programs. Thus, these programs provide an ideal sociocultural context for second language learning.

The National Perspective

The Two-Way model has become increasingly popular in the United States over the past decade, growing from approximately thirty programs in 1987 (Lindholm, 1987) to over two-hundred programs today.[1] Growth has been particularly rapid over the past five years, with two-thirds of the current programs being developed

[1]The 1995 Directory of Two-Way Bilingual Programs in the United States (Christian and Whitcher, 1995) lists 182 TWI programs. However, current surveys collected by the Center for Applied Linguistics indicate that there are now over 200 TWI programs in the United States. The updated directory should be available by Summer, 1997.

during that time period. TWI programs are located in eighteen states and the District of Columbia. The majority of programs offer instruction in English and Spanish; however, other target languages include Arabic, Cantonese, French, Japanese, Korean, Navajo, Portuguese, and Russian. Most programs operate at the elementary (K-6) level, although articulation to the secondary level is becoming an increasingly important issue as many elementary programs are now on the verge of graduating their first cohort of students.

Key Elementary School

Key Elementary School, located in Arlington, Virginia, has had a Two-Way Immersion program since 1986. The program adheres to a 50/50 model, meaning that at all grade levels (K-5), 50% of instruction is in English and 50% of instruction is in Spanish, the target language. Starting with one first grade class, the program has added one grade level per year, plus kindergarten. It has also expanded to include multiple classes per grade level.

The program is housed within a language magnet school, where an ESOL/HILT program also functions for language minority students who are not enrolled in the TWI program. In addition to the K-5 neighborhood magnet site at Key, there are now two other Spanish/English elementary TWI programs in Arlington, as well as a program at the middle school and at the high school through grade 10.

During the 1994-95 school year, there were 318 students in the TWI program at Key; 49% were native Spanish speakers, 51% were native English speakers, and 2% were native speakers of other

languages. At their time of entry into the program, 40% of the students were classified as LEP, as compared with the district average of 19%. The student population is predominantly White and Latino, with fewer than 5% African American students and less than 2% Asian American students. About one-third of the students qualify for free or reduced lunch, which is comparable to the district average. Originally, the program began as a gifted and talented program, but now it is open to all students in the district. However, there are still larger proportions of gifted and talented students in the TWI classes than in the other classes in the school.

Academic instruction takes place in both languages on a daily basis. The morning instruction is conducted in one language, and the afternoon instruction is conducted in the other. Language arts is taught in both languages, while academic content areas are taught in one language or the other. Teachers are usually responsible for instruction in only one language; however, there are a few cases in which the same teacher delivers instruction in both English and Spanish.

The 1994-95 staff included fourteen teachers, three kindergarten aides, and a bilingual coordinator. In most cases, teachers are native speakers of the language they use for instruction; however, two of the Spanish teachers are native English speakers who lived in Spanish speaking countries for extended periods of time. Teachers are strong and consistent language models, using only the designated language for both academic and social purposes.

In general, the classrooms provide language-rich environments, both with regard to the environmental print and to the opportunities for language development. Specifically, hands-on activities, cooperative learning, writing across the curriculum, and the use of manipulatives figure prominently in TWI classrooms at Key. These types of pedagogical strategies provide students with the opportunity to develop vocabulary and practice new grammatical structures.

Methods

The data for this study come primarily from classroom observations, student performance measures, and samples of student work. Classroom observations were conducted during six site visits over a two-year period (1994-96). Each visit lasted two to three days, and included extensive observations that focused on student and teacher language use, pedagogical techniques, and patterns of student participation and interaction. Six focal students (three native Spanish speakers and three native English speakers) were chosen at each grade level for more focused observation regarding language use and participation patterns.

In addition to the classroom observation data, outcomes on student performance measures such as oral proficiency assessments and English standardized achievement tests were also collected. The oral proficiency measure used for Spanish was the SOPR (Student Oral Proficiency Rating), on which teachers rate comprehension, fluency, vocabulary, pronunciation, and grammar. The oral proficiency measure used for English was the LAS-O (Language

Assessment Scales - Oral), which measures vocabulary, listening comprehension, and story retelling. The SOPR is given to students every year, while the LAS-O is only administered in third grade. Finally, writing samples were also collected from focal students' portfolios twice per year (fall and spring) during the two-year period of data collection.

Data analysis was predominantly qualitative, focusing largely on the oral language data collected during classroom observations and the writing samples collected from the portfolios. For the oral language data, analyses focused on areas such as code-switching, domain differences (i.e. language use with peers vs. language use with teachers; academic language vs. social language, etc.), and grammatical development. For the writing samples, analyses focused on four areas: organization, topic development, language use, and mechanics. In addition to the qualitative analyses, descriptive quantitative analyses were conducted with the oral proficiency outcome measures and standardized achievement scores.

Student Language Use

Oral Language

In general, students were observed using the language of instruction to the best of their ability when talking with the teacher and when engaged in academic activities. In the lower grades, native English speakers were sometimes observed addressing the teacher in English during Spanish time, but this practice was less common in the upper grades.

The use of Spanish during English time was very rare, and most frequently occurred during peer interactions between Spanish dominant children. In contrast, English was used frequently during Spanish time for social interactions among peers of both native language backgrounds, especially when the teacher was not in close proximity, or students did not fear punishment for not using the target language. Upper grade teachers generally reminded students to switch to Spanish if they overheard English language use during Spanish time.

With regard to English language development, all native English speakers entered the program as fluent English speakers, and remained that way. No instances of interference from Spanish or delay in English language development were noticed during the observations or detected by the proficiency measures.

The English language development of the native Spanish speakers was also very strong. According to the 1993 evaluation results (Barfield and Rhodes, 1994), 100% of the native Spanish speaking third graders were rated as fluent on the LAS-O, and no significant differences were found in oral English proficiency between native English speakers and native Spanish speakers. Classroom observations during the 1994-96 data collection period supported these findings. In upper grade classrooms, the observers found it difficult to distinguish between native English speakers and native Spanish speakers during English class time.

With regard to oral Spanish proficiency, results also indicated strong oral language development, although not quite as strong as oral English development, for both native Spanish speakers and

native English speakers. The SOPR results from 1995 indicate that 88% of native Spanish speaking first graders tested as fluent in Spanish, as compared to 100% of native English speaking first graders rated as fluent in English. This is perhaps not surprising, given that many of the native Spanish speaking children may have lived all or most of their life in the United States, and therefore may have had limited opportunities to develop their Spanish language proficiency outside of the home. One hundred percent of native Spanish speakers in grades 2 and above did all test as fluent in Spanish, however. This pattern of Spanish language development is similar to findings from previous years, and suggests that the Key TWI program is effective in promoting simultaneous Spanish language development and English language acquisition among the native Spanish speakers.

Similarly, the 1995 SOPR ratings for the native English speakers also follow similar trends from previous years' evaluations. As with the native Spanish speakers, the percentage of native English speakers that are rated as fluent in Spanish is highest in the upper grade levels. In first and second grade, approximately 20% of native English speakers were rated as fluent in Spanish, while approximately 50% were rated as fluent in grades four and five. This contrasts with the 100% of native Spanish speakers who tested as fluent in English in third grade. That is, 100% of the native Spanish speakers at Key are rated as fluent in both English and Spanish by third grade, while 50% of the native English speakers receive the same ratings by fifth grade. Again, this is not surprising,

given that the program operates in the United States, where English is the dominant language of society.

Classroom observations tend to support the findings from the SOPR ratings. By third grade, native English speakers were observed communicating well in Spanish, although their speech was slower than that of native Spanish speakers, and they sometimes used non-standard grammar and/or English vocabulary. Fifth graders were more fluent than third graders, but were still not at the level of the native Spanish speakers. Errors in word order, word choice, and agreement in number and gender were still fairly common among the native English speakers, and among some native Spanish speakers as well.

In general, then, with regard to oral language development, it appears that for the children involved in this study, oral English proficiency developed fully in all students, regardless of native language, such that all students were rated as fluent in English. Great strides were also made by all students in oral Spanish proficiency, and all students achieved communicative competence by fifth grade. However, a gap in Spanish fluency remained between the native Spanish speakers and native English speakers in the fifth grade. Moreover, grammatical and lexical errors persisted in the oral Spanish language use of many native English speakers, and some native Spanish speakers as well.

Written Language

In the fall of 1993, Spanish and English writing samples were collected from the portfolios of eight target children. Four of the

children were in the third grade at that time; the other four students were in the fifth grade. At each grade level, two native Spanish speakers and two native English speakers were targeted. Two years later, in the spring of 1995, Spanish and English writing samples were again collected from the portfolios of the same children. In doing this, it was hoped that some developmental changes in the children's writing ability in both their first and second languages might be observed.

Because the writing samples collected for use in this study were authentic (i.e. written in the context of class assignments rather than from a specific prompt for the purpose of this study), they covered a wide range of topics and writing genres. For this reason, a holistic, qualitative approach was used to evaluate them. Each writing sample was analyzed according to the same four categories: organization, topic development, mechanics, and language use. This was done in order to ensure thorough evaluation of each sample as well as facilitate comparison across samples.

In general, all of the writing samples that were collected for this study were of high quality with regard to all four domains of analysis. In particular, the organization of all essays was very strong, both for native Spanish speakers and native English speakers, writing in both English and Spanish. Perhaps this is an area that is targeted for explicit instruction by the teachers, given the consistently high quality across languages and grade levels.

Overall, the English essays were very good, and there was very little indication that the simultaneous development of Spanish literacy either interfered with or delayed the English writing ability

of native Spanish speakers or native English speakers. This supports the findings from the 1994 evaluation (Barfield and Rhodes, 1994), which found that the Two-Way Immersion classes scores higher than district averages on the district's English writing assessment.

The Spanish essays of all the students were also very good, and were usually of comparable quality to the English essays with regard to organization and topic development. There did tend to be more mechanical errors in the Spanish essays, however, especially with respect to conventions that are specific to Spanish, such as inverted punctuation and accent marks. There also tended to be more linguistic and grammatical errors in the Spanish essays, frequently of the same varieties as were reported in the summary of oral Spanish language use, such as word order, word choice, and agreement in gender and number.

While there were no instances of code-switches to Spanish in the English essays, there were a few code-switches to English in the Spanish essays. Again, this is highly consistent with the patterns of oral language use that were observed in the classrooms. It is interesting to note that all code-switches in the writing samples were flagged by quotation marks, which seems to indicate intentionality and metalinguistic awareness on the part of the student.

As was the case with oral language proficiency, the English writing samples of the native English speakers and native Spanish speakers were frequently comparable, especially at the upper grades. That is, among the fifth and sixth grade writing samples, it was difficult to distinguish the work of a native English speaker

from that of a native Spanish speaker. In Spanish, the essays of the native Spanish speakers tended to be more sophisticated than those of the native English speakers, especially with regard to vocabulary and certain grammatical features such as verb tenses and pronoun usage. At the same time, however, grammatical and lexical errors were still present in the Spanish essays of the native Spanish speakers, usually to a greater extent than in their English essays. Given that Key implements a 50/50 instructional model, and given that English is the dominant language in the United States, this is not a surprising finding.

In order to better illuminate some of the general patterns that have been discussed, it would be helpful to look more closely at the writing development of one student. Julio[2] is a native Spanish speaker who was in third grade when the initial writing samples were collected. His third grade English essay is a one-paragraph description of a science experiment.

Julio organized his essay well, with a personal introduction, a topic sentence that introduces the experiment, supporting details that include the necessary materials and the steps that should be followed, and a conclusion. In addition, Julio develops the topic well, and puts it in an interactive context by posing as a scientist who is leading a novice through a scientific experiment.

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[2]a pseudonym

Process of the egg experiment

Hello I am Dr. Pérez i would like to tell you about an experiment. It is about an egg and how you can observe how it is changing. the steps are the following. first you need to make a chart so you can write results ¿what has happen? You make sure you have all the materials you need to make the experiment. You take a hard boiled egg and put it in the vinegar wait for a momment and write the results ¿what has happen? Now take the other hard boiled egg and put it in the mouthwash and wait a moment and write the results ¿what has hapen? And that is my presentation i hope you liked it.

Typical of many third graders, Julio has omitted some details from his essay that would make it clearer for the reader. For example, the first thing that he tells the reader to do is *"...make a chart so you can write results."* However, he does not specify what kind of chart we should make, and since he has not explained the experiment beyond saying that *"It is about an egg and how you can observe how it is changing,"* it is difficult to imagine what kind of chart would be helpful for recording observations. This type of limited instruction continues throughout the essay. Since Julio is a non-native English speaker, it is difficult to know if the lack of details reflects an inability to communicate them in English, a lack of understanding of the scientific concepts, a lack of awareness of what can be assumed to be shared knowledge between the writer and the readers, or a typical developmental trait of third grade writing.

Mechanically, Julio's third grade English essay is relatively strong. There are few spelling errors; the only word that is consistently misspelled is *"happen"* instead of "happened." This may

be not so much a spelling problem as a reflection of his status as a non-native English speaker. That is, he simply may not hear the "ed" ending on "happened", and therefore may think that he is spelling the word correctly.

In addition, Julio seems to have difficulty with the concept of sentence boundaries in English. For example, *"You take a hard boiled egg and put it in the vinegar wait for a momment and write the results"*. This difficulty with sentence boundaries in English may be related to his first language experiences, since longer sentences structures are very typical in Spanish. However, it may also be a developmental issue, as it is not uncommon for third graders to struggle with sentence segmentation.

One idiosyncrasy in Julio's third grade English writing sample that seems clearly related to his knowledge of writing in Spanish is his use of inverted question marks prior to the question, *"¿what has happen?"* He asks this question three times, and each time, he includes the inverted question mark prior to the question. In this situation, it does seem clear that Julio is applying his knowledge of Spanish mechanical conventions to his English writing.

In general, despite the fact that English is his second language, Julio's linguistic ability in English is fairly sophisticated. Any difficulties in comprehension that a monolingual English speaker may have would more likely be due to missing information than to incorrect linguistic structures. Most verbs are in the present tense, which makes sense, given that the task is to describe the steps involved in carrying out a science experiment. There are no instances of code-switching in this essay.

Julio's third grade Spanish essay is also a one paragraph description of a science experiment. Like his third grade English essay, this essay includes a thesis statement (*"Les quiero hablar de un experimento se trata de ver como cambia la materia."*), numbered steps to follow in order to perform the experiment, and a conclusion. Unlike in his English essay, he does not establish himself as a scientist in the Spanish essay.

Un experimento de cambios quemico y fisico

> *Les quiero hablar de un experimento se trata de ver como cambia la materia. los pasos son los pasos son los siguientes. pasos: 1)Hagamos una tabla para anotar los observaciones 2)Echar una cuchara de azucár y despues poner la etiqueta y escribir la palabra azucár. 3)luego echamos 4 cucharadas de vinagre en la taza de azucar. espere un ratito y observenlo. y escribe que esta pasando. 4)con la otro cuchara pon una cuchara de bircabonate de soda en la otra taza y pon la etiqueta y escribir bircabonate de soda 5)Y devueta pon 4 cucharas de vinagre en el bircarbonate de soda y despues esperar y despues observar y anotar los resultados y esos son los pasos gracias*

As with his third grade English essay, Julio's third grade Spanish essay is missing a few details that would help the reader to understand how to perform the experiment. For example, he begins again by telling us to construct a table to help us record results before he tells us what the experiment entails: *"Hagamos una tabla para anotar los observaciones"*. For this reason, it seems likely that the omission of these details in the English essay was not due to second language issues, but rather, to developmental issues, such as

a lack of awareness of how to contextualize information for readers that do not possess shared knowledge.

This developmental theory seems plausible because a lack of important details seemed to be a systematic issue in all of the third grade writing samples, regardless of the language of the essay or the dominant language of the child. It might be helpful for the teachers to ask children to exchange papers and to try to replicate the experiments based on the information presented in the essays. This may help the children to learn how to sequence information logically so that someone with no prior knowledge could follow the instructions.

As with the English essay, there are a few places in the Spanish essay where Julio seems to have difficulty with sentence segmentation. This in turn impacts his ability to correctly use conventions of punctuation and capitalization. For example, the last step in this essay says, *"Y devueta pon 4 cucharas de vinagre en el bircarbonate de soda y despues esperar y despues observar y anotar los resultados y esos son los pasos gracias"* ("And then put 4 spoons of vinegar in the baking soda and then wait and then observe and write down the results and those are the steps thank you"). Again, given that this appears in both his English and Spanish third grade essays, it seems that this difficulty with segmentation is also a developmental issue.

In general, Julio's use of language in this essay is very good, and would certainly be comprehensible to a monolingual Spanish speaker. The vocabulary is appropriate, and the grammatical structures are usually accurate. However, he frequently changes the

way that he addresses the reader, and this makes it somewhat difficult to follow at times. Specifically, when he gives instructions to the reader, he alternates between using the subjunctive first person plural form of a verb ("*Hagamos*", "let's make"), the indicative first person plural form of a verb ("*echamos*", "we put"), the formal command form ("*espere*", "wait"), the informal command form ("*pon*", "put"), and the infinitive (as command) verb form ("*escribir*", "write"). While any of these verb forms would be appropriate in this context, it is not necessarily appropriate to alternate back and forth among all of them in a single text.

Julio's use of pronouns is more sophisticated than that of the other third graders, and reflects his native language ability. For example, he says, *"**Les** quiero hablar de un experimento..."* ("I want to talk to you about an experiment..."). He is the only student who demonstrates correct usage of an indirect object pronoun at this grade level.

Finally, as has been previously stated, one of the most common errors in both oral and written Spanish for both native Spanish speakers and native English speakers is agreement between nouns and adjectives. An example of this type of error appears in the title of this essay:*"Un experimento de cambios quemico y fisico"* ("An experiment about chemical and physical changes"). In this situation, the two adjectives do agree with the noun in terms of gender, but not in terms of number. That is, since the noun "cambios" is plural, the two adjectives also require the plural "s" marker. This type of error is very common in the TWI classrooms, and would therefore be

a likely candidate if the teacher were to target certain grammatical patterns for formal instruction.

Implications

Returning to the two initial research questions, the implications of this study become fairly clear. First, all of the language and literacy data collected for this study indicate that all students in the TWI program at Key Elementary are demonstrating appropriate grade-level English language development. This indicates two very important things: 1)It is possible for language minority students to develop high levels of English language proficiency and continue to develop their first language at the same time, and 2)It is possible for native English speakers to develop bilingual proficiency in a partial immersion setting without compromising their native language development. That is, the 50/50 program model as implemented at Key Elementary is successful in promoting high levels of English language and literacy development in all students.

With regard to Spanish language development, it is also clear that both groups were able to develop and/or maintain Spanish language competence. At the same time, it is also clear that Spanish oral language and literacy ability was usually lower than English language and literacy ability for all students, especially in the upper grades. This may be due to any number of factors, such as lower language status, less time on task, or lack of explicit instruction. In this situation, if improved Spanish proficiency for all students was

considered a desirable outcome, there are a few possible interventions that schools/teachers could try.

First, attempts could be made to elevate the status of Spanish within the school community. This is especially important in the cases where the TWI program operates as a strand within a mainstream school. Conducting whole school activities in both languages, using Spanish for morning announcements, or creating partnerships with sister schools in Spanish-speaking countries are ways to send messages to the whole school community that the Spanish language is valued.

Second, it might be possible to increase the amount of time of Spanish instruction, even if the community does not have an interest in implementing a 90/10 model. In many TWI programs, especially those that operate within mainstream schools, the percentage of daily Spanish time is actually lower than the stated percentage, because classes taught by specialists, such as art, P.E., and music, are frequently taught in English. If these subject were taught in Spanish, or alternately in the two languages, this could help to increase the amount of instructional time in Spanish without deviating from the chosen model.

Finally, given that there seemed to be some clear patterns regarding the types of language errors that are most common, it seems that some formal language instruction could be useful, especially in the upper grades. At Key, there is already teacher support for this idea, and some teachers have tried it in their classrooms, with promising results. There is a need to learn more about what these teachers are doing, in order to better understand

the types of formal instruction that are most helpful. Documenting the effective practices of TWI teachers who are currently developing strategies for explicit yet contextualized instruction could be an invaluable resource for teachers who will face these issues in the future.

Conclusion

Based on the data gathered for this study, it appears that the English language development of both native Spanish speakers and native English speakers at Key Elementary is progressing well, and is comparable to that of native English speakers in monolingual English classrooms. Therefore, the fact that Key students receive half of their academic instruction in Spanish does not seem to have negative consequences for their English language development.

Moreover, the Spanish language proficiency of all Key students is impressive, and it is encouraging to see a program that has successfully accomplished the difficult task of developing bilingualism and biliteracy in the entire student population. At the same time, however, Spanish language ability in both speaking and writing lags behind English language ability for both groups of students, and the differential is wider for native English speaking students. There are a few things that might be done to try to close this gap, such as increasing instructional time in Spanish, or providing more formal language instruction in Spanish.

The current five year cycle of research on Two-Way Immersion will continue to explore the issues raised by this study. The language and literacy development of students in eleven TWI

programs across the country will be followed to see if similar language development patterns hold for a larger and more varied group of students. In addition, program variables such as percentage of instructional time in Spanish and language of initial literacy instruction will be taken into account in order to see the extent to which they have an impact on language and literacy development in Spanish and English. As the number of TWI programs in the United States continues to rise, these questions become increasingly important to answer.

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Appendix

Evaluation categories used for this study

1) organization
- title
- use of paragraphs
- topic sentence
- conclusion
- general organization/ordering of information

2) topic development
- details
- cohesion
- audience awareness
- originality/creativity

3) mechanics
- spelling
- punctuation
- capitalization

Spanish only
- accent marks and tildes

4) language
- code switches
- comprehensibility to (monolingual) native speaker
- variety and correctness of grammatical structures
- variety and appropriate use of verbs/verb tenses